

REMARKS

Claims 1-23 of which claims 1, 14 and 17 are independent are now pending in the application. The following comments address all stated grounds for rejection and place the presently pending claims, as identified above, in condition for allowance.

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Summary of an Illustrative Embodiment of the Present Invention

The illustrative embodiment provides a method and apparatus to address ink droplet placement problems associated with an inkjet printhead in an image forming system. The image forming system that practices the illustrative embodiment of the present invention discharges ink droplets from the printhead onto an imaging medium to create an image. Once the image is created, differences between a parameter of a first ink droplet and a parameter of a second ink droplet are obtained through a measurement technique. The parametric measurement of the selected ink droplets in the image is then used by the image forming system to derive an ink droplet compensation value for each ink droplet.

Upon determination of an ink droplet compensation value, such as a velocity compensation value, the value is placed in a data file accessible to a processor associated with the image forming system. The processor utilizes the values in the data file to regulate, for example, to advance or retard, ink droplet discharge from the printhead of the image forming system to correct for ink droplet placement errors detected in the created image. Thus, the illustrative embodiment of the present invention provides a method and apparatus that

compensates for the differences between the parameter of a first ink droplet and a parameter of a second ink droplet as measured following the creation of an image on an image medium.

Rejection of claims 1, 4, 6, 7, 10, 12, 13, 14, 16, 17, 19, 22 and 23 under 35 U.S.C. §102

The Examiner rejects 1, 4, 6, 7, 10, 12, 13, 14, 16, 17, 19, 22 and 23 under 35 U.S.C. §102 as being anticipated by U.S. Patent number 4,328,504 to Weber *et al.* (hereinafter “Weber”). In view of the following remarks, Applicant contends that claims 1, 4, 6, 7, 10, 12, 13, 14, 16, 17, 19, 22 and 23 are patentable over Weber.

The cited Weber patent relates to optical sensing of ink droplets from an ink jet printhead. Specifically, Weber positions an optical sensing device relative to the printhead for detecting an actual position of an ink spot generated by the printhead. The Examiner contends that Figure 8 and column 6, lines 26-58 of Weber disclose measuring the difference between a position of the first ink droplet and the position of the second ink droplet following the creation of the image. However, Figure 8 and column 6, lines 26-58 of Weber illustrates that a method is provided to determine a target of said value for a single ink droplet. The dot deviation “d” that the Examiner cites and that is illustrated in Figure 8 and explained in column 6 represents a position error for a single ink droplet. Weber defines the position error as a difference in the actual position of the ink droplet and the desired position of the ink droplet as illustrated in Figure 8. The above passages cited by the Examiner lack any explicit or suggestive power to teach or suggest the measuring or the determining of a difference between a parameter of a first ink droplet and parameter of a second ink droplet once the image is formed. Consequently, the cited Weber

patent fails to anticipate Applicant's invention of creating an image on an imaging medium and determining from that image the difference between a parameter of a first ink droplet and a parameter of a second ink droplet.

Moreover, the Applicant's invention advantageously eliminates the need for a specialized apparatus, such as the optical device disclosed in Weber, to measure and correct for drop placement errors. Accordingly, Applicant's invention simplifies ink drop alignment by avoiding the need to maintain optical alignment of the alignment device itself. As such, the Applicant requests reconsideration and withdrawal of the rejection of claims 1, 4, 6, 7, 10, 12, 13, 14, 16, 17, 19, 22 and 23 as being anticipated by Weber.

Rejection of Claims 2, 3, 5, 8, 20 and 21 under 35 U.S.C. §103

The Examiner rejects claims 2, 3, 5, 8, 20 and 21 as being unpatentable over Weber in view of U.S. patent number 5, 212,497 of Stanley *et al.* (hereinafter "Stanley"). Applicant contends that these claims distinguish patentability over the cited art.

As discussed above Weber fails to anticipate claims 1 and 17 of the present invention. Accordingly, pending claims 2, 3, 5 and 8 which depend, either directly or indirectly from independent claim 1, and pending claims 20 and 21, which depend either directly or indirectly from independent claim 17 include the novel features of independent claims 1 and 14, respectively. Accordingly, claims 2, 3, 5, 8, 20 and 21 are also patently distinct from the cited Weber patent.

Rejection of claims 9, 15 and 18 under 35 U.S.C. §103(a)

The Examiner rejects claims 9, 15 and 18 under 35 U.S.C. §103(a) as being unpatentable over Weber in view of U.S. Patent number 5,576,744 of Niikura *et al.* (hereinafter Niikura). Applicant contends claims 9, 15 and 18 distinguish patentability over the cited art.

As discussed above, Weber fails to anticipate claims 1, 14 and 17 of Applicant's invention. Accordingly, since claim 9 depends either directly or indirectly from independent claim 1, and dependent claim 15, depends either directly or indirectly from independent claim 14, and dependent claim 18, which depends either directly or indirectly from independent claim 17 include the novel features of each respective independent claim. Accordingly, claims 9, 15 and 18 are patently distinct from the cited Weber patent.

Rejection of claim 11 under 35 U.S.C. §103(a)

The Examiner rejects claim 11 under 35 U.S.C. §103(a) as being unpatentable over Weber in view of Stanley, and further in view of U.S. Patent number 4,847,638 of Moriyama, et al. Applicant contends that claim 11 distinguishes patentability over the cited art. As discussed above, Weber fails to anticipate claim 1 of the Applicant's invention. Accordingly, since claim 11 depends, either directly or indirectly, from independent claim 1, claim 11 includes the novel features of claim 1, and hence is patently distinct of the cited Weber patent.

CONCLUSION

In view of the remarks set forth above, Applicant contends that claim 1-23 presently pending in this application, are patentable, and in condition for allowance. If there are any remaining issues, an opportunity for interview is requested prior to the issuance of an advisory action.

Respectfully submitted,

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